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PATENT
BC9-98-105

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
GLEN R. WALTERS, et al.	)	Group Art Unit: 2663
Serial No.: 09/299,309	)	
Filed: April 26, 1999	)	Examiner: D. Ferris
For: SIMULATED LOW-BANDWIDTH CONNECTION	)	
	)	

APPELLANTS' BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellants hereby respectfully submit their brief in support of their appeal to the Board of Patent Appeals and Interferences from the decision dated January 30, 2003 of the Examiner finally rejecting claims 1-24 of the above-referenced application.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on 10/30/03
Date of Deposit

Stephen Bongini
Appellant, Assignee, or Representative

Signature 10/30/03
Dated

1. REAL PARTY IN INTEREST

The real party in interest is International Business Machines Corporation (IBM) of Armonk, New York.

2. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

3. STATUS OF CLAIMS

Claims 1-24 are pending. Claims 1-24 were finally rejected in the Office Action dated January 30, 2003, and are on appeal.

Attached hereto is an Appendix containing a copy of claims 1-24, which are the claims involved in this appeal.

4. STATUS OF AMENDMENTS

An "Amendment After Final" was filed on April 30, 2003. In an Advisory Action dated May 16, 2003, the Examiner stated that the Amendment After Final would be entered for purposes of Appeal.

5. SUMMARY OF THE INVENTION

The present invention is directed to the simulation of a low-bandwidth connection over a higher-bandwidth connection by using a speed control layer to limit the speed at which data is transferred. One preferred embodiment of the present invention provides a method of simulating a low-bandwidth connection over a higher-bandwidth connection, as described in the specification at page 4, line 16 through page 6, line 11. According to this method, data from a first device 20 is received at a speed control layer 24 at a first speed. There is a high-bandwidth connection at a third speed between the speed control layer 24 and a client device 30, and the maximum data transfer speed of the high-bandwidth connection between the speed control layer 24 and the client device 30 is limited so as to transfer the data at a second speed over the high-

bandwidth connection from the speed control layer 24 to the client device 30. [page 5, line 1 through page 6, line 11]

The second speed at which the data is transferred from the speed control layer 24 to the client device 30 is less than the first speed and less than the third speed. In other words, the maximum speed at which data is transferred from the speed control layer 24 to the client device 30 (the second speed) is limited so as to be: less than the speed at which the data is received from the first device 20 (the first speed), and less than the speed of the high-bandwidth connection between the speed control layer 24 and the client device 30 (the third speed).

Thus, even though data is received at the speed control layer 24 at the first speed and there is a high-bandwidth connection at the third speed between the speed control layer 24 and the client device 30, data transfer between the speed control layer 24 and the client device 30 is limited to the slower second speed. This simulates a low-bandwidth connection at the slower (second) speed between the first device 20 and the client device 30, even though a faster connection (at the lower of the first and third speeds) actually exists between the first device 20 and the client device 30. [page 4, lines 16-24]

6. ISSUE

Whether claims 1-24 are unpatentable under 35 U.S.C. § 103(a) over Garroppo et al. ("A teletraffic analysis of dial-up connections over PSTN", IEEE Global Telecommunications Conference, 1998, v. 2, pp. 1190-1195).

7. GROUPING OF CLAIMS

Group I

Claims 1-14 stand or fall together.

Group II

Claims 15-24 stand or fall together.

8. ARGUMENT

A. CLAIMS 1-14 (GROUP I) ARE PATENTABLE OVER GARROPPO ET AL.

Appellants respectfully submit that claims 1-14 are patentable over Garroppo et al. because Garroppo does not teach or suggest a method of simulating a low-bandwidth connection in which the maximum data transfer speed over a connection to a client device is limited so as to transfer data to the client device at a speed that is less than the actual speed of this connection.

Claims 1 and 9 recite a method and program for simulating a low-bandwidth connection over a higher-bandwidth connection in which data is received at a speed control layer at a first speed, and the maximum data transfer speed of a high-bandwidth connection between the speed control layer and a client device, which is at a third speed, is limited so as to transfer the data from the speed control layer to the client device at a second predetermined speed, which is less than the first speed and less than the third speed of the high-bandwidth connection.

The Garroppo reference discloses the collection and analysis of traffic data for an Internet dial-up access server. Figure 1 of Garroppo shows a computer system that was used to analyze the traffic of the dial-up access server. As shown, the computer system includes multiple client computers that are connected to the access server over a PSTN (i.e., telephone) network. The access server includes an analog modem pool and a dial-up router, and is directly connected to the Internet at a speed of 64 kbps or 128 kbps. Each of the client computers connects to the access server over the PSTN network via modem at a speed of 28.8 kbps or 33.6 kbps. During operation, data from a remote server is received at the access server at a first speed (e.g., 128 kbps), and is then transferred from the access server to one of the client computers at a second speed (e.g., 33.6 kbps).

Thus, in the computer system disclosed in Garroppo, the access server is connected to a client computer by an analog modem connection at a given speed (e.g., 33.6 kbps), and data is always transferred from the access server to this client computer over the analog modem connection at the actual speed of the connection (e.g., 33.6 kbps). While two client computers

may connect to the access server via connections at different speeds, data is always transferred from the access server to each client computer at the actual speed of that client's connection. In other words, the maximum data transfer speed over the connection between the access server and a client computer is never limited by the access server to a speed that is less than the actual speed of this connection (between the access server and the client computer).

In contrast, in preferred embodiments of the present invention, the maximum data transfer speed over the connection between the speed control layer and the client device is limited so as to transfer data to the client device at a speed that is less than the actual speed of this connection. More specifically, in the embodiments recited in claims 1 and 9, there actually exists a connection at a third speed between the speed control layer and the client device. However, data from the first device, which is received at the speed control layer at a first speed, is transferred from the speed control layer to the client device over this connection at a second speed, which is less than the actual speed of this connection. More specifically, this second speed (at which the data is transferred from the speed control layer to the client device) is less than the first speed (at which the data is received from the first device) and less than the third speed (i.e., the actual speed of the connection that exists between the speed control layer and the client device).

Thus, data transfer to the client device is limited to a slower speed, even though the connection to the client device is actually at a faster speed. This simulates a low-bandwidth connection at the slower speed between the sending device and the client device, even though a faster connection exists between the sending and client devices.

As recognized by the Examiner, Garroppo does not disclose simulating a lower speed connection over a high-bandwidth connection. However, the Examiner has taken the position that simulating a lower speed connection over a high-bandwidth connection would be obvious to one of ordinary skill in the art because a "high bandwidth connection" is relative and Garroppo discloses that hardware can be upgraded so as to adjust the speed of a connection. Appellants respectfully submit that one of ordinary skill in the art would not have had any motivation for modifying the computer system disclosed in Garroppo so as to produce a method of simulating a

low-bandwidth connection in which the maximum data transfer speed over a connection to a client device is limited so as to transfer data to the client device at a speed that is less than the actual speed of this connection.

It is well-settled that a reference must provide some motivation or reason for one of ordinary skill in the art (working without the benefit of hindsight reconstruction using the appellant's specification) to make the necessary changes in the disclosed system. The mere fact that a reference may be modified in the direction of the claimed invention does not make the modification obvious unless the reference expressly or impliedly teaches or suggests the desirability of the modification. In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir. 1984); Ex parte Clapp, 227 USPQ 972, 973 (Bd. App. 1985); Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. App. 1984).

Garroppo merely discloses that hardware can be upgraded to change the speed of the connection between the access server and from 64 kbps to 128 kbps, and to change the speed of the connection between the client computers and the access server from 28.8 kbps to 33.6 kbps. Such hardware upgrades operate to change the actual speed of a connection between two points. In no way does such a hardware change operate to limit the maximum data transfer speed over a connection to a speed that is less than the speed of the connection.

For example, if the access server first has 33.6 kbps modems, then the client computer can make a first connection with the access server at a speed of 33.6 kbps such that all data will be transferred from the access server to the client computer at 33.6 kbps (i.e., the speed of the connection that then exists between the client computer and the access server). If the modems of the access server are changed to 28.8 kbps modems, then the client computer will be able to make a new connection with the access server but only at a speed of 28.8 kbps such that all data will be transferred from the access server to the client computer at 28.8 kbps (i.e., the speed of the new connection existing between the client computer and the access server). Thus, while upgrading or changing hardware does change the speed of a connection between two devices, it does not limit a connection that is at a specific speed so as to transfer data between the two devices at some speed that is less than the specific speed of that connection. In other words, such

a change in hardware changes the speed of the connection itself, possibly to a lower speed, but it does not limit the data transfer speed over a connection to less than the speed of the connection.

The present invention is directed to allowing a client computer that has a connection at one speed to easily simulate the experience that would be had if the connection was instead at some lower speed. Basically, any connection between two points is always made at some specific data transfer speed. This is necessary to allow data to be transferred in an comprehensible manner. Of course, the speed of the connection that will be made between the two points can be adjusted by changing the devices making the connection or the route itself. For example, the modem on a device can be upgraded to a higher speed modem as suggested by the Examiner. Similarly, the user of a device with a high speed LAN connection can switch to another device that uses an actual modem for connecting. In either case, a new connection at a different data transfer speed than the original connection is made between the two points. This is very different than limiting the maximum data transfer speed of a connection at a specific speed so as to transfer data at a speed that is less than the specific speed of the connection.

Garroppo fails to meet the basic requirement for a finding of obviousness established by the courts in Gordon, Clapp, and Chicago Rawhide. There is simply no suggestion or motivation in Garroppo of modifying the disclosed computer system so as to produce the claimed method. Garroppo does not teach or suggest limiting the maximum data transfer speed over a connection to a client device so as to transfer data to the client device at a speed that is less than the actual speed of this connection. In Garroppo, the maximum data transfer speed over the connection to a client computer is never limited to a speed that is less than the speed of this connection. Without Appellants' specification, there would be no suggestion or motivation to one of ordinary skill in the art at the time of the invention to produce the claimed method. It is respectfully submitted that the Examiner is engaging in hindsight reconstruction of the claimed invention.

Garroppo does not teach or suggest a method for simulating a low-bandwidth connection in which the maximum data transfer speed over a connection to a client device is limited so as to transfer data to the client device at a speed that is less than the actual speed of this connection.

B. CLAIMS 15-24 (GROUP II) ARE PATENTABLE OVER GARROPPO ET AL.

Appellants respectfully submit that claims 15-24 are patentable over Garroppo et al. because Garroppo does not teach or suggest a computer system or proxy server that limits the maximum data transfer speed over a connection to a client device so as to transfer data to the client device at a speed that is less than the actual speed of this connection.

Claim 15 recites a computer system that includes a first device transferring data at a first speed, and a speed control layer coupled between the first device and a client device for limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and the client device so as to transfer data from the first device to the client device over the high-bandwidth connection at a second predetermined speed that is less than the first speed and less than the normal speed of the high-bandwidth connection. Similarly, claim 20 recites a proxy server that includes speed control means for limiting the maximum data transfer speed of a high-bandwidth connection between a server and a client computer so as to transfer data from the server to the client computer over the high-bandwidth connection at a first predetermined speed that is less than the normal speed of the high-bandwidth connection.

The Garroppo reference discloses the collection and analysis of traffic data for an Internet dial-up access server. Figure 1 of Garroppo shows a computer system that was used to analyze the traffic of the dial-up access server. As shown, the computer system includes multiple client computers that are connected to the access server over a PSTN (i.e., telephone) network. The access server includes an analog modem pool and a dial-up router, and is directly connected to the Internet at a speed of 64 kbps or 128 kbps. Each of the client computers connects to the access server over the PSTN network via modem at a speed of 28.8 kbps or 33.6 kbps. During operation, data from a remote server is received at the access server at a first speed (e.g., 128 kbps), and is then transferred from the access server to one of the client computers at a second speed (e.g., 33.6 kbps).

Thus, in the computer system disclosed in Garroppo, the access server is connected to a client computer by an analog modem connection at a given speed (e.g., 33.6 kbps), and data is always transferred from the access server to this client computer over the analog modem

connection at the actual speed of the connection (e.g., 33.6 kbps). While two client computers may connect to the access server via connections at different speeds, data is always transferred from the access server to each client computer at the actual speed of that client's connection. In other words, the maximum data transfer speed over the connection between the access server and a client computer is never limited by the access server to a speed that is less than the actual speed of this connection (between the access server and the client computer).

In contrast, in preferred embodiments of the present invention, the maximum data transfer speed over the connection between the speed control layer and the client device is limited so as to transfer data to the client device at a speed that is less than the actual speed of this connection. More specifically, in the embodiments recited in claims 15 and 20, there is a high-bandwidth connection at a normal speed between a first device and a client device. A speed control layer or means transfers data at a first speed to the client device over the high-bandwidth connection. This first speed (at which the data is transferred to the client device) is less than the normal speed (or actual speed) of the high-bandwidth connection between the speed control layer and the client device. Thus, data transfer to the client device is limited to a slower speed, even though the connection to the client device is actually at a faster speed. This simulates a low-bandwidth connection at the slower speed between the sending device and the client device, even though a faster connection exists between the sending and client devices.

As recognized by the Examiner, Garroppo does not disclose simulating a lower speed connection over a high-bandwidth connection. However, the Examiner has taken the position that simulating a lower speed connection over a high-bandwidth connection would be obvious to one of ordinary skill in the art because a "high bandwidth connection" is relative and Garroppo discloses that hardware can be upgraded so as to adjust the speed of a connection. Appellants respectfully submit that one of ordinary skill in the art would not have had any motivation for modifying the computer system disclosed in Garroppo so as to produce a computer system or proxy server that simulates a low-bandwidth connection by limiting the maximum data transfer

speed over a connection to a client device so as to transfer data to the client device at a speed that is less than the actual speed of this connection.

It is well-settled that a reference must provide some motivation or reason for one of ordinary skill in the art (working without the benefit of hindsight reconstruction using the appellant's specification) to make the necessary changes in the disclosed system. The mere fact that a reference may be modified in the direction of the claimed invention does not make the modification obvious unless the reference expressly or impliedly teaches or suggests the desirability of the modification. In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir. 1984); Ex parte Clapp, 227 USPQ 972, 973 (Bd. App. 1985); Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. App. 1984).

Garroppo merely discloses that hardware can be upgraded to change the speed of the connection between the access server and from 64 kbps to 128 kbps, and to change the speed of the connection between the client computers and the access server from 28.8 kbps to 33.6 kbps. Such hardware upgrades operate to change the actual speed of a connection between two points. In no way does such a hardware change operate to limit the maximum data transfer speed over a connection to a speed that is less than the speed of the connection.

For example, if the access server first has 33.6 kbps modems, then the client computer can make a first connection with the access server at a speed of 33.6 kbps such that all data will be transferred from the access server to the client computer at 33.6 kbps (i.e., the speed of the connection that then exists between the client computer and the access server). If the modems of the access server are changed to 28.8 kbps modems, then the client computer will be able to make a new connection with the access server but only at a speed of 28.8 kbps such that all data will be transferred from the access server to the client computer at 28.8 kbps (i.e., the speed of the new connection existing between the client computer and the access server). Thus, while upgrading or changing hardware does change the speed of a connection between two devices, it does not limit a connection that is at a specific speed so as to transfer data between the two devices at some speed that is less than the specific speed of that connection. In other words, such a change in hardware changes the speed of the connection itself, possibly to a lower speed, but it does not limit the data transfer speed over a connection to less than the speed of the connection.

The present invention is directed to allowing a client computer that has a connection at one speed to easily simulate the experience that would be had if the connection was instead at some lower speed. Basically, any connection between two points is always made at some specific data transfer speed. This is necessary to allow data to be transferred in an comprehensible manner. Of course, the speed of the connection that will be made between the two points can be adjusted by changing the devices making the connection or the route itself. For example, the modem on a device can be upgraded to a higher speed modem as suggested by the Examiner. Similarly, the user of a device with a high speed LAN connection can switch to another device that uses an actual modem for connecting. In either case, a new connection at a different data transfer speed than the original connection is made between the two points. This is very different than providing a computer system or proxy server that limits the maximum data transfer speed of a connection at a specific speed so as to transfer data at a speed that is less than the specific speed of the connection.

Garroppo fails to meet the basic requirement for a finding of obviousness established by the courts in Gordon, Clapp, and Chicago Rawhide. There is simply no suggestion or motivation in Garroppo of modifying the disclosed computer system so as to produce the claimed computer system or proxy server. Garroppo does not teach or suggest a computer system or proxy server that limits the maximum data transfer speed over a connection to a client device so as to transfer data to the client device at a speed that is less than the actual speed of this connection. In Garroppo, the maximum data transfer speed over the connection to a client computer is never limited to a speed that is less than the speed of this connection. Without Appellants' specification, there would be no suggestion or motivation to one of ordinary skill in the art at the time of the invention to produce the claimed computer system or proxy server. It is respectfully submitted that the Examiner is engaging in hindsight reconstruction of the claimed invention.

Garroppo does not teach or suggest a computer system or proxy server that simulates a low-bandwidth connection by limiting the maximum data transfer speed over a connection to a client device so as to transfer data to the client device at a speed that is less than the actual speed of this connection.

In view of the foregoing, it is respectfully submitted that the application and the claims are in condition for allowance. Reversal of the final rejection of claims 1-24 is respectfully requested.

Respectfully submitted,

Date: October 30, 2003

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9. APPENDIX

1. A method of simulating a low-bandwidth connection over a higher-bandwidth connection, said method comprising the steps of:

receiving at a speed control layer data from a first device at a first speed; and

limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and a second device so as to transfer the data from the speed control layer to the second device over the high-bandwidth connection at a second predetermined speed, which is less than the first speed,

wherein the second device is a client device,

the high-bandwidth connection is at a third speed, and

the second predetermined speed at which the data is transferred from the speed control layer to the second device over the high-bandwidth connection is less than the third speed of the high-bandwidth connection.

2. The method as defined in claim 1, wherein in the limiting step, the data is transferred over a high-bandwidth LAN.

3. The method as defined in claim 2, wherein the second predetermined speed is a modem connection speed.

4. The method as defined in claim 1, further comprising the step of:

before the limiting step, setting the second predetermined speed.

5. The method as defined in claim 4, further comprising the step of changing the second predetermined speed to a fourth predetermined speed, which is also less than the first speed and less than the third speed of the high-bandwidth connection.

6. The method as defined in claim 1, further comprising the steps of:

receiving second data from the first device at the first speed; and

limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and a third device so as to transfer the second data from the speed control layer to the third device over the high-bandwidth connection at a fifth predetermined speed, which is different than the second predetermined speed, less than the first speed, and less than the third speed of the high-bandwidth connection,

wherein the third device is a client device.

7. The method as defined in claim 1, further comprising the steps of:

receiving second data from the first device at the first speed; and

limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and a third device so as to transfer the second data from the speed control layer to the third device over the high-bandwidth connection at the second predetermined speed,

wherein the third device is a client device.

8. The method as defined in claim 1, further comprising the steps of:

receiving second data from the first device at the first speed; and

limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and a third device so as to transfer the second data from the speed control layer to the third device over the high-bandwidth connection at the third speed of the high-bandwidth connection,

wherein the third device is a client device.

9. A machine-readable medium encoded with a program for simulating a low-bandwidth connection over a higher-bandwidth connection, said program containing instructions for performing the steps of:

receiving at a speed control layer data from a first device at a first speed; and

limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and a second device so as to transfer the data from the speed control layer to the second device over the high-bandwidth connection at a second predetermined speed, which is less than the first speed,

wherein the second device is a client device,

the high-bandwidth connection is at a third speed, and

the second predetermined speed at which the data is transferred from the speed control layer to the second device over the high-bandwidth connection is less than the third speed of the high-bandwidth connection

10. The machine-readable medium as defined in claim 9, wherein said program further contains instructions for performing the step of:

before the limiting step, setting the second predetermined speed.

11. The machine-readable medium as defined in claim 10, wherein said program further contains instructions for performing the step of changing the second predetermined speed to a fourth predetermined speed, which is also less than the first speed and less than the third speed of the high-bandwidth connection.

12. The machine-readable medium as defined in claim 9, wherein said program further contains instructions for performing the steps of:

receiving second data from the first device at the first speed; and

limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and a third device so as to transfer the second data from the speed control layer to the third device over the high-bandwidth connection at a fifth predetermined speed, which is different than the second predetermined speed, less than the first speed, and less than the third speed of the high-bandwidth connection,

wherein the third device is a client device.

13. The machine-readable medium as defined in claim 9, wherein said program further contains instructions for performing the steps of:

receiving second data from the first device at the first speed; and

limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and a third device so as to transfer the second data from the speed control layer to the third device over the high-bandwidth connection at the second predetermined speed,

wherein the third device is a client device.

14. The machine-readable medium as defined in claim 9, wherein said program further contains instructions for performing the steps of:

receiving second data from the first device at the first speed; and

limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and a third device so as to transfer the second data from the speed control layer to the third device over the high-bandwidth connection at the third speed of the high-bandwidth connection,

wherein the third device is a client device.

15. A computer system comprising:

a first device transferring data at a first speed;

a second device, the second device being a client device; and

a speed control layer coupled between the first and second devices, the speed control layer limiting the maximum data transfer speed of a high-bandwidth connection between the speed control layer and the second device so as to transfer data from the first device to the second device over a high-bandwidth connection at a second predetermined speed that is less than the first speed and less than the normal speed of the high-bandwidth connection.

16. The computer system as defined in claim 15, wherein the speed control layer includes an interface that is used to set the second predetermined speed.

17. The computer system as defined in claim 15, further comprising:

a third device coupled to the speed control layer, the third device being a client device,

wherein the speed control layer also limits the maximum data transfer speed of a high-bandwidth connection between the speed control layer and the third device so as to transfer data from the first device to the third device at a third predetermined speed which is different from the second predetermined speed.

18. The computer system as defined in claim 15, further comprising:

a third device coupled to the speed control layer, the third device being a client device,

wherein the speed control layer also limits the maximum data transfer speed of a high-bandwidth connection between the speed control layer and the third device so as to transfer data from the first device to the third device at the second predetermined speed.

19. The computer system as defined in claim 15, further comprising:

a third device coupled to the speed control layer, the third device being a client device,

wherein the speed control layer does not limit the maximum data transfer speed of a high-bandwidth connection between the speed control layer and the third device.

20. A proxy server for transferring data between a server and at least one client computer, said proxy server comprising:

a first interface for transferring data with the server;

a second interface for transferring data with the client computer; and

speed control means for limiting the maximum data transfer speed of a high-bandwidth connection between the server and the client computer so as to transfer data from the server to the client computer over a high-bandwidth connection at a first predetermined speed that is less than the normal speed of the high-bandwidth connection.

21. The proxy server as defined in claim 20, wherein the speed control means includes an interface that is used to set the first predetermined speed before the speed control means limits the maximum data transfer speed.

22. The proxy server as defined in claim 20, further comprising:

a third interface for transferring data with a second client computer,

wherein the speed control means also limits the maximum data transfer speed of a high-bandwidth connection between the server and the second client computer so as to transfer data from the server to the second client computer over a high-bandwidth connection at a second predetermined speed, which is different than the first predetermined speed and less than the normal speed of the high-bandwidth connection.

23. The proxy server as defined in claim 20, further comprising:

a third interface for transferring data with a second client computer,

wherein the speed control means also slows data transfer to the second client computer to the first predetermined speed.

wherein the speed control means also limits the maximum data transfer speed of a high-bandwidth connection between the server and the second client computer so as to transfer data from the server to the second client computer over a high-bandwidth connection at the first predetermined speed.

24. The proxy server as defined in claim 20, further comprising:

a third interface for transferring data with a second client computer,

wherein the speed control means does not limit the maximum data transfer speed of a high-bandwidth connection between the server and the second client computer.